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ABSTRACT

Research indicates that first (L1) and second language (L2) acquisition involve some of the same processes, yet L2 learners apparently acquire the structures of the target language in a systematic way by passing through a sequence of developmental stages. This study shows that in the earliest stages of syntactic development the L2 learner's linguistic competence is fundamentally different from that attributed to a child acquiring his native language. It is argued that L1 learners construct their earliest multi-word utterances on the basis of the conceptual properties underlying lexical items until they discover the syntactic principle of natural languages. In contrast, L2 learners will skip the pre-syntactic stages of L1 development because they are familiar with the syntactic principle through L1 experience. Data from two children, aged 7 and 5 years, who are acquiring German in a natural environment, corroborate the hypothesis. The data show that the L2 learners acquired the different types of sentences successively, and that they used one specific word order pattern for each grammatical relation. This pattern could always be matched with corresponding structures of the adult language. It seems that because the L2 learner already knows the syntactic principle of language, only those utternaces will occur which reflect syntactic properties of the target language. (AMH)

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EARLY SYNTACTIC DEVELOPMENT IN FIRST AND SECOND LANGUAGE ACQUISITION

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1. Introduction

The question of whether or not second language learning involves the same or similar processes as first language acquisition has been a widely debated issue during the past decade. Prior to the appearance of the first empirical studies on second language development numerous authors (Lane 1962, McNeill 1965, Corder 1967, Newmark & Reibel 1968, Reibel 1971) dealt with the problem on the basis of primarily theoretical considerations. In general, it was recognized that the external, i.e. situational and contextual factors involved in second language learning differ fundamentally from those of first language acquisition. Consequently, some - as yet to be specified - regularities of second language development should expectedly be different from first language acquisition (Ervin-Tripp 1974). However, most researchers hypothesized that the psycholinguistic processes and strategies underlying the acquisition of a first or second language are basically the same.

The findings of the first empirical studies on L2 development led to a much more precise and rigorous formulation of the problem concerning the relationship between first and second language acquisition. Observations on early syntactic L2 development as well as studies investigating the order in which L2 learners acquire certain grammatical morphemes showed quite clearly that second language acquisition constitutes what Dulay & Burt 1974b called a 'creative construction process'. L2 learners acquire the structures of the target language in a highly systematic and partially predictable way by passing through an ordered sequence of developmental stages. L2 acquisition is not an imitative re-production of the structures the child/adult is exposed to; rather the L2 learner constructs various intermediate grammatical systems which may eventually lead to native-like competence. In this respect, L1 and L2 acquisition seem to involve the same basic processes.

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On a more specific level, however, it has to be determined whether

or not the order of developmental stages and the types of structures which regularly occur in language development are the same for both L1 and L2 acquisition.

Studies on the acquisition of grammatical morphemes (Dulay & Burt 1974a-c) seemed to indicate that there is a 'natural sequence' in second language development. It was found that most L2 learners acquired English grammatical morphemes in roughly the same order, independent of their age (Bailey, Madden & Krashen 1974), mother tongue (Dulay & Burt 1974c), or the type of formal instruction involved (Perkins & Larsen-Freeman 1975). However, although certain similarities seem to exist (Boyd 1975) L1 order and L2 order are not fully identical.

Studies on early syntactic L2 development found structures and developmental sequences that are very similar to those reported for first language acquisition. Huang 1971 gives a detailed account of a Taiwanese boy's acquisition of English interrogative structures and concludes that his subject's L2 development roughly parallels English L1 acquisition as described by Klima & Bellugi 1966. Ravem 1974 observed his two Norwegian-speaking children who acquired English as L2 and found interrogative and negative structures in their L2 utterances which are typical of certain developmental stages in English L1 learners. Milon 1974 found the development of English negation in the speech of a 7-year old Japanese boy to be similar to English L1 acquisition. Gillis & Weber 1976 supplement Milon's findings with data on the development of interrogation (L1 = Japanese, L2 = English).

The available evidence seems to indicate that L2 acquisition is not only a creative construction process, but that furthermore L2 learners follow in many cases the same developmental trends as L1 learners.

I have tried to show elsewhere (Felix, in press) that the striking similarities between L1 and L2 acquisition reported in the above-mentioned studies are frequently an artifact of the methods of observation and analysis. In many studies intervals of observation were inappropriately long so that major stages in the children's development were missed. Furthermore, researchers such as Huang 1971 and Milon 1974 simply imposed Klima & Bellugi's stage-division on their own data without seriously examining the possibility of L2-specific developments.

In this paper I will show that in the earliest stages of syntactic development the L2 learner's linguistic competence is fundamentally different from the one commonly attributed to a child acquiring his mother tongue. Many of the syntactic structures typical of early L1 acquisition do not occur in the speech of children who learn a second language. Furthermore, the order in which certain basic sentence types emerge in second language acquisition is essentially different from the respective L1 order.

Some of these differences can be directly related to the fact that the L2 learner makes use of his past (= L1) linguistic experience. However, the use of L1 knowledge does not simply result in language transfer; rather it seems that the L2 learner's prior linguistic experience enables him to make much more specific assumptions about general properties of natural languages. In this sense, I will argue that the L1 learner constructs his earliest multi-word utterances on the basis of the conceptual properties underlying lexical items, until he discovers the syntactic principle of natural languages. In contrast, the L2 learner is familiar with this syntactic principle as a result of his L1 experience, and will therefore skip the pre-syntactic (= cognition-based) stage(s) of L1 development.This different approach to the acquisition process leads to some fundamental dissimilarities in the early structures produced by L1 and L2 learners. Although I will restrict my attention to the acquisition of sentence types, these early differences strongly influence later developments (Felix 1977, in press). Similarly, the acquisition of interrogation and negation - if recorded in detail - is far from being the same in L1 and L2 development (Felix 1976, in press).

2. The Data

During the past years we have observed at Kiel University/Germany a group of English-speaking children, aged 4 - 7, who acquired German as a second language in a naturalistic environment. In this paper I will present data from Guy, 7 years old, and his sister Julie, 5 years old. These data will be compared with Huang's 1971 data on the acquisition of English by the 5-year old Taiwanese boy Paul and then be contrasted with what is known about the early stages of first language acquisition.

Guy and Julie were observed for a total period of 8 months. Two interviewers visited the children at their home 2 to 3 times per week. Each visit lasted approximately 2 1/2 - 3 hours and was tape-recorded in its entire length. The tapes were subsequently transcribed in conventional orthography with comments on the situational context.

Before the children's family moved to this country, Guy and Julie were not exposed to German. At home they always maintained English. Guy was enrolled in a local school two months after the family had arrived in Germany. At the same time Julie started going to kindergarten. The two children heard the new language primarily from their peers. Only rarely were they exposed to German conversations among adults. Apart from weekends Guy and Julie spent roughly half of their day in a German-speaking environment. With the exception of the two interviewers and some of Guy's school teachers the children mixed only with monolingual German speakers.

The corpus contains only spontaneous utterances. No formal experiments were carried out. In general, the two interviewers joined the children's activities whatever these happened to be. Most of the time we played in the basement with the children's toys. During the summer we frequently played in the garden or took the children for a walk to the nearby airport or city park. Although we originally intended to administer some accompanying tests, the children proved not to be very co-operative in artificial communication situations.

3. Successive vs. Simultaneous Acquisition of Sentence Types

During the first 2 months Guy and Julie produced only three different multi-word utterance types: a) sentence imitation, b) two-word utterances, usually of the form Adj + N or Adv + Adj, c) copular sentences.

The term 'sentence imitation' refers to those utterances which, from their very first occurrence, are fully grammatical. Compared to other utterances of the same time they show a high degree of structural complexity. They furthermore occur only for a relatively short period of time and then disappear. These properties seem to indicate that the children learn and store such structures as a whole and do not

generate them by rules of grammar. Here are a few examples from Guy:

(1) lass das doch sein	(cut it out!)
(2) möchten Sie eine Tasse Kaffee?	(would you like a cup of coffee?)
(3) hau ab, du Doofmann	(get out, you idiot)

The majority of non-copular two-word utterances produced during the initial stage consist of a noun preceded by an adjective. Occasionally we also find adv + adj combinations:

(4) grüne Baum	(green tree)
(5) viele Ball	(many ball)
(6) ganz gross	(very big)

The noun phrases show grammatical word order, but deviate from adult usage in that the adjective-noun agreement is not yet fully established.

Apart from utterances such as (1) - (6) the predominant structure in Guy's and Julie's early speech is the copular sentence:

(7) das ist ein Wind	(that is a wind)
(8) dies ein Haus	(this a house)
(9) das ist grün	(that is green)
(10) das gut	(that good)
(11) das ist for du	(that is for you)

In these early copular sentences the copula is frequently, though not regularly missing. The subject of the sentence is always a pronoun, never a noun. In predicate function nouns emerged chronologically first, later adjectives appeared, and finally prepositional phrases became productive (see Felix 1977, in press). During this early period no main verb sentences occurred. The developmental priority of the copular sentence is furthermore demonstrated by the fact that both children used this structure in situations in which the adult language requires a different sentence type:

(12) We are playing 'family life'. F., the father, is taking notes at his desk. M., the mother, is preparing food. After a while M. says to Julie in German:

M: I'm finished. Julie, go over to Daddy and tell him to join us for dinner.

J. walks over to F.'s desk.

J: das ist Mittagessen (that is dinner)

(13) Julie tries to put a candy-box back on a shelf. However, the shelf is too high for her. She gives the box to F. whom she obviously wants to put the box back.
J: du da ist das (you-there is that)

(14) Julie and F. are drawing pictures. After a while Julie goes to F. and looks over his shoulder, apparently trying to see what F. has drawn.
J: was ist du? (what are you?)
F: (in German) I'm drawing a tree

These examples suggest that Julie constructs her utterances in strict accordance with one out of a very limited set of adult utterance types. Apparently she knows that utterances have to conform to certain syntactic rules. Since copular structures are the only sentence-type she has at her disposal at this early stage, she uses this structure even in situations in which the adult language requires different (and possibly more complex) sentence types. It appears that Julie follows a strategy in which form ranges over content.

After this initial stage other sentence types begin to appear. The first non-copular sentence structures to occur all contain an auxiliary as the only verb constituent. This construction - though with certain restrictions - is also permissible in adult German:

(15) ich kann das (I can (do) that)
(16) du kann hier (you can (play) here)
(17) ich muss nicht Schule (I need not (go to) school)

Approximately two weeks later we record a growing number of main verb sentences:

(18) ich essen Banane (I eat banana)
(19) du bleib hier (you stay here)
(20) ich komme gleich (I come soon)

These data show quite clearly that our L2 learners acquired the different sentence types successively, i.e. in a distinct chronological order. It is particularly striking that in the earliest period Guy and Julie produced predominantly copular sentence structures.

It appears that the 5-year old Taiwanese boy Paul whose acquisition of English as a second language was observed and analyzed by Huang 1971 followed much the same pattern as Guy and Julie. Paul, too, used copular sentences productively long before other sentence types started to appear in his speech. However, Paul's earliest copular sentences consistently lacked the copula itself, a phenomenon which was not recorded for Guy and Julie. According to Huang copular structures can be distinguished from homomorphemic NP constructions by intonation alone.

Although Huang does not explicitly deal with the development of sentence types in his analysis, the relevant data can be found in the appendix to his study. From these data the following order of acquisition (of sentence types) can be established:

1. copular sentences	(1/23 - 4/10)
2. S + V + O	(starting approx. 4/10)
3. S + V	(starting approx. 4/19)
4. imperative	(starting approx. 4/19)
5. 'want' + V	(starting approx. 5/10)
6. Aux + V	(starting approx. 5/31)

Although Paul acquired the various sentence structures successively, the order of acquisition differs from the one we observed in Guy's and Julie's speech development in some significant points. In particular, Aux + V constructions are comparatively late with Paul, but emerge directly after the copular sentence in our German L2 learners' development. I have tried to show elsewhere (Felix, in press) that this difference in the order of acquisition is presumably due to the different formal properties of auxiliaries in English and German.

Whereas Guy, Julie and Paul acquired the basic sentence types of the target language one after the other, L1 learners have been shown to produce a multitude of different sentence structures as early as in the initial two-word stage. While the copular sentence seems to be the preferred structure in the early stage of L2 acquisition, Bowerman 1973 observed at least 12 different structures in the L1 speech of her subject Kendall at MLU 1.48. Sentences which contain verbs are among the earliest and most frequent multi-word utterances of L1 learners. In contrast, Guy, Julie, and Paul acquired main verb sentences distinctly later than copular structures.

Similarly, Bloom 1970 found - at an MLU below 2.0 - five different relations underlying the frequent N + N combinations. None of these structures appeared during the early stages of our German L2 learners' speech development. In particular, neither Guy and Julie nor Paul produced two-term S + O utterances which seem to be typical of early L1 acquisition.

The available data suggest that L1 learners tend to acquire some of the basic sentence types simultaneously, i.e. during the early two -word stage, whereas L2 learners acquire these structures successively, i.e. one after the other in an ordered sequence. Consequently, compared to the structural diversity in the early speech of L1 learners, our L2 learners' competence during the earliest stages of their L2 development appears to be amazingly restricted.

4. Word Order

It has frequently been observed that L1 learners use different word order to express the same grammatical relation. Though it is true that many sentences reflect adult word order, there are numerous examples in which constituents are combined in a way which is not permissible in the adult language. The following examples of grammatical and ungrammatical word order are taken from Bowerman 1973:

S + V	V + S
Kendall swim	hug Mommy
Mommy sleep	see Kendall
V + O	**O + V**
look Kendall	doggie sew
bite...finger	Kimmy kick
S + V + O	**O + V + S**
Kimmy ride bike	Mommy hit Kendall

Variation in word order was also observed by Park 1974 in his study on German first language acquisition. Park found examples of all six mathematically possible two-term combinations of subject, verb, and object in the speech of a Swiss girl at age 2.0 - 2.4.

Contrary to this, in declarative sentences our German L2 learners used one specific word order pattern for each grammatical relation. Both in copular and later in S + V/Aux + (O) sentences the children's word order reflects the constituent structure of the corresponding adult utterances. Deviant word order occurs only much later in connection with the placement of adverbs and various German inversion transformations.

During the earliest stages of their speech development L1 learners typically produce utterances which cannot directly be related to structures of the adult language, but which seem to represent the child's own grammatical system. Some of the by now classical examples from Braine 1963 are ' allgone shoe', 'byebye man','see hot', 'nightnight office', etc. Looking through the available literature I did not find any of such structures in the early speech of L2 learners. Guy's and Julie's declarative sentences could always be matched with corresponding structures of the adult language. Although the children frequently overgeneralized adult structures (see Felix, in press), there is no indication that, in forming basic sentence types, they followed construction principles which cannot be derived from syntactic rules of the target language.

5. Discussion

A comparison of early L1 and L2 utterances yields two striking differences: a) the L2 learner produces considerably fewer different structures than the L1 learner, b) certain utterance types, such as 'see hot' and 'nightnight office', which do not reflect construction principles of the adult language, are restricted to L1 acquisition and do not seem to occur in the speech of L2 learners.

With respect to a) it needs to be explained why the L2 learner who is both cognitively and intellectually more advanced than the L1 learner and who has furthermore the benefit of prior linguistic knowledge, expresses his intentions during the initial stage predominantly through copular sentences and certain types of isolated noun phrases, whereas the L1 learner produces a multitude of different structures as early as the two-word stage. If the L1 learner is capable of processing a relatively large variety of grammatical relations as soon as he starts to construct multi-word utterances, why shouldn't the L2 learner be able to do at least the same?

I believe that this fundamental difference between early first and second language development can be accounted for if we assume that L1 and L2 learners follow different construction principles as they approach the task of acquiring the language they are exposed to. Following Bloom 1973 I will assume that the L1 learner - at the earliest stages of his development - combines words to express relations between cognitive concepts. That is, the L1 learner follows at first a conceptual construction principle. Only later does he discover the syntactic principle of language and will then acquire the various grammatical, i.e. syntactic categories and structures of the adult language. Consequently the earliest two-term utterances express conceptual, not grammatical relations. Before the L1 learner starts to acquire adult rules or parts of adult rules, he will pass through a pre-syntactic stage of development during which utterances are constructed on the basis of non-syntactic properties of words.

Due to his past (= L1) linguistic experience the L2 learner already knows what the L1 learner still has to discover (= acquire), namely the syntactic principle of natural languages. The L2 learner knows right at the beginning of the acquisition process that words may not be randomly combined, even if the underlying conceptual and/or semantic relation is contextually clear. Verbal utterances have to conform to certain formal grammatical rules. It is exactly this knowledge which the L1 learner does not yet possess at the beginning of his language development. He, in contrast, has to gradually acquire this knowledge. Consequently, the L1 learner will construct his first utterances on the basis of non-syntactic rules.

It is conceivable that the L2 learner's past linguistic experience will enable him to form much more specific hypotheses about the structure of the language he has to acquire. In particular, he is likely to make certain assumptions about general properties of all natural languages, as e.g. that all natural languages have syntactic rules. Consequently he does not have to go through the pre-syntactic stage of development characteristic of early first language acquisition. He will immediately begin to identify syntactic structures/properties in the speech surrounding him as soon as he is exposed to the new language.

If the L2 learner is, in fact, able to approach the task of

language acquisition at a more advanced level, we would expect not to find any of those utterance types in his speech which, in early L1 learning, bear evidence of the conceptual, i.e. non-syntactic construction principle. This expectation is borne out by the data. Utterances such as 'allgone shoe', 'see hot', etc. which cannot be derived from adult syntactic structures and thus indicate the operation/application of the conceptual construction principle do not occur in early L2 speech. That is, in early L2 speech only those utterances will occur which in some way reflect <u>syntactic</u> properties/ rules of the target language.

As the L2 learner attempts to discover syntactic regularities in the language he is exposed to, his learning capacity imposes restrictions on the number of structures he can acquire at a time. Thus it is not surprising that we find only a relatively small number of different structure types during the initial stage(s) of development. As the L2 learner advances, new structures emerge, and this, as we have seen, in an ordered sequence. The successive acquisition of basic sentence types is therefore a natural result of the L2-specific approach to language learning.

In contrast, the L1 learner has presumably mastered a relatively large variety of conceptual relations by the time he discovers the syntactic principle of language. It would be highly uneconomical if this discovery led to a decrease in the child's general capacity of communication. The child will therefore attempt to express at least the majority of conceptual relations he is familiar with within the newly discovered framework of syntactic rules. Consequently , his early speech will show a correspondingly large variety of different utterance types. The conceptual construction principle leads therefore to the simultaneous emergence of basic sentence types in early L1 speech.

Why L2 learners tend to begin with copular structures and why L1 learners seem to prefer (reduced) main verb sentences is still an open question. However, the differences between early L1 and L2 development outlined in this paper suggest that L1 and L2 learners approach the task of language acquisition in fundamentally different ways. I have tried to explore one possibility of how the L1 and L2 approach may differ.

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